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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/579,420	05/25/2000	Michael Klagsbrun	701039-47875-C	7567

7590 05/06/2003

David S Resnick
Nixon Peabody LLP
101 Federal Street
Boston, MA 02110

EXAMINER	
NICKOL, GARY B	
ART UNIT	PAPER NUMBER
1642	

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/579,420	KLAGSBRUN ET AL.	
	Examiner	Art Unit	
	Gary B. Nickol Ph.D.	1642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) *2,3 and 7-14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 4-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Response to Amendment

The Amendment filed June 18, 2002 (Paper No. 12) in response to the Office Action of February 12, 2002 is acknowledged and has been entered as applicants have meet the sequence requirements in response to the letter mailed 09-10-02 of Paper No. 14.

Claims 1-14 are pending.

Claims 2-3, and 7-14 have been withdrawn from further consideration by the examiner under 37 CFR 1.142(b) as being drawn to non-elected inventions.

Claims 1, and 4-6 are currently under consideration.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

New Rejection:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,219,739 (Tischer *et al.*, 1993).

Tischer *et al.* teach an isolated polypeptide consisting of 44 amino acids. As such, the polypeptide of Tischer *et al.* is a portion of SEQ ID NO:1 wherein said portion includes amino acids 22-44 of SEQ ID NO:1 (see attached sequence listing comparison at the end of this action). Tischer *et al.* further teach methods to inhibit angiogenesis in an individual (including determining dosage regimens-column 15, line 21) comprising administering an isolated polypeptide having a portion of SEQ ID NO:1 that includes amino acids 22-44 (column 14, lines 39+). Inherently, such an administration is a pharmaceutical composition. The patent further teaches (column 14, lines 39-68 to column 15) that by administering a heterodimer composed of different subunits of the VEGF family, each of the subunits may bind a specific receptor subtype, thereby blocking the bound receptor from interacting effectively with endogenous homodimeric VEGF. This reads on an isolated polypeptide having a portion of SEQ ID NO:1 having VEGF *antagonist* activity. And although the patent does not teach that the carrier is acceptable for topical applications to the skin or application to the eye, the intended use of the compound must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. A composition is a composition irrespective of what its intended use is. See In re Tuominen, 213 USPQ 89 (CCPA 1982).

All other rejections and or objections are withdrawn in view of applicant's amendments and arguments there to.

No claim is allowed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary B. Nickol Ph.D. whose telephone number is 703-305-7143. The examiner can normally be reached on M-F, 8:30-5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Caputa can be reached on 703-308-3995. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 for regular communications and 703-308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Gary B. Nickol Ph.D.
Examiner
Art Unit 1642

GBN
April 24, 2003

ANTHONY C. CAPUTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

PT New peptide antagonists of vascular endothelial growth factor (VEGF)
XX
PS Claim 1; Page 46; 53pp; English.
XX
CC This sequence represents a vascular endothelial growth factor (VEGF)
CC antagonist of the invention. The antagonist is a portion of the seventh
CC exon of VEGF, and acts as an antagonist to all VEGF isoforms, even if
CC they do not have exon 7. The VEGF antagonist peptides can be used to
CC treat diseases or disorders associated with VEGF-induced
CC neovascularisation or inappropriate angiogenesis. Diseases and disorders
CC treated include retinal neovascularisation, haemagiomas, solid tumour
CC growth, leukaemia, metastasis, psoriasis, neovascular glaucoma, diabetic
CC retinopathy, rheumatoid arthritis, osteoarthritis, endometriosis,
CC muscular degeneration, and retinopathy of prematurity (ROP), and Kaposi's
CC sarcoma. Solid tumours expressing VEGF are also a target for gene
CC therapy using the peptide antagonist of the invention, e.g. neoplasms of
CC the central nervous system (glioblastomas, astrocytomas, neuroblastomas,
CC meningiomas, ependymomas), cancers of hormone-dependent tissues (e.g.
CC prostate, testicles, uterus, ovary, mammary carcinoma), melanomas,
CC cancers of the lung, and cancers of the gastrointestinal tract. Current
CC treatment of angiogenic diseases is inadequate. Although preliminary
CC results with antiangiogenic proteins are promising, the proteins are
CC relatively large in size and so are difficult to use and produce.
CC Antiangiogenic agents that show improvement in size, ease of production,
CC stability and/or potency would be desirable. The peptides of the
CC invention go some way to achieving these aims.
XX
SQ Sequence 45 AA;

Query Match 100.0%; Score 264; DB 20; Length 45;
Best Local Similarity 100.0%; Pred. No. 4.9e-22;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PCGPCSERRKHLFVQDPQTCKCSCKNTDSRCKARQLELNERTCRC 45
||||||||||||||||||||||||||||||||||||||||||||
Db 1 pcgpcserrkhlfvqdpqtckcsckntdsrckarqlelnertcrc 45

RESULT 2
AAR42613
ID AAR42613 standard; Protein; 44 AA.
XX
AC AAR42613;
XX
DT 28-OCT-1993 (first entry)
XX
DE Encoded by human VEGF-165 exon VII.
XX
KW Angiogenesis; wound healing; mitogen; vascular endothelial cells;
KW Vascular Endothelial Cell Growth Factor; hVEGF-165; hVEGF-121;
KW alternative RNA splicing.
XX
OS Homo sapiens.
XX
PN US5219739-A.
XX
PD 15-JUN-1993.
XX
PF 27-JUL-1989; 89US-0387545.
XX
PR 27-JUL-1989; 89US-0387545.
PR 14-DEC-1989; 89US-0450883.
PR 27-JUL-1990; 90US-0559041.
XX
PA (SCIO-) SCIOS NOVA INC.
XX
PI Abraham JA, Fiddes JC, Mitchell RL, Tischer EG;
XX
DR WPI; 1993-205302/25.
DR N-PSDB; AAQ49609.
XX
PT Isolated DNA sequences, expression vectors and transformant cells
PT - used for large scale prodn. of vascular endothelial cell growth
PT factor, for treating wounds in which neo-vascularisation is
PT required
XX
PS Claim 8; Fig 8; 40pp; English.
XX
CC The sequences of the 8 possible exons encoding human vascular
CC endothelial cell growth factor, together with contiguous splice
CC junctions, were obtained from overlapping genomic inserts. A method
CC for producing VEGF is claimed comprising culturing mammalian cells
CC transformed with an expression vector containing exons I-V and
CC VIII. See AAQ44261 for exon I and AAQ49604-Q49610 for exons II-VIII.
XX
SQ Sequence 44 AA;

Query Match 96.6%; Score 255; DB 14; Length 44;
Best Local Similarity 100.0%; Pred. No. 4.5e-21;
Matches 44; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PCGPCSERRKHLFVQDPQTCKCSCKNTDSRCKARQLELNERTCR 44
|||||||||||||||||||||||||||||||||||||||||||||
Db 1 pcgpcserrkhlfvqdpqtckcsckntdsrckarqlelnertcr 44

RESULT 3
AAY23249
ID AAY23249 standard; Protein; 44 AA.
XX
AC AAY23249;
XX
DT 31-AUG-1999 (first entry)
XX
DE SEQ ID NO. 11 of WO9930157.
XX
KW Cancer; vascular endothelial growth factor receptor; VEGF receptor;
KW neuropilin; NP-1; NP-2; metastatic potential; malignant cell;
KW breast cancer; prostate cancer; ischemia; gene therapy;
KW angiogenesis; metastasis.
XX
OS Homo sapiens.
XX
PN WO9930157-A2.
XX
PD 17-JUN-1999.
XX
PF 09-DEC-1998; 98WO-US26127.
XX
PR 12-DEC-1997; 97US-0069687.
PR 09-DEC-1997; 97US-0069155.
XX
PA (CHIL-) CHILDRENS MEDICAL CENT.
XX
PI Klagsbrun M, Miao H, Soker S, Takashima S;
XX
DR WPI; 1999-395021/33.
XX
PT Diagnosis and prognosis of cancer using vascular endothelial growth
PT factor receptors
XX
PS Disclosure; Page 80; 82pp; English.
XX
CC The specification describes methods for the diagnosis and prognosis of
CC cancer using vascular endothelial growth factor (VEGF) receptors
CC (neuropilins) such as VEGF165R/NP-1 and NP-2 which are associated with
CC metastatic potential of a malignant cell. The methods can be used for
CC the diagnosis and prognosis of cancer, especially breast and prostate
CC cancer. DNA encoding VEGF165R/NP-1 or NP-2 can be used to treat
CC ischemia, e.g. heart and limb. The DNA can also be used as an adjunct
CC to gene therapy with VEGF. The VEGF165R/NP-1 or NP-2 proteins can be
CC used to identify antagonists and agonists, which can be used to
CC inhibit angiogenesis, and metastasis in malignant cells. Antibodies
CC directed against VEGF165R/NP-1 or NP-2 proteins can also be used for